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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/914,335	12/27/2001	Thierry Grenot	01-515	2366

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EXAMINER

NGUYEN, HANH N

ART UNIT	PAPER NUMBER
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2662

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/914,335

Applicant(s)

GRENOT, THIERRY

Examiner

Hanh Nguyen

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Application filed on 12/27/01.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-16,21,23 and 26-28 is/are rejected.
- 7) ☒ Claim(s) 17-20,22,24 and 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13, 14, 15, 16, 21, 23, 26, 27 are rejected under 35 USC 103(a) as being unpatentable over **Ennis, Jr. et al.** (US Pat. No. 5,521,907) in view of **Zhang et al.** (US Pat. No. 5,535,193), in view of **Guerin et al.** (US Pat. No. 6,377,546 B1), and further in view of **Chapman et al.** (US Pat. No. 6,330,226 B1).

In claims 13, 15 and 26, **Ennis, Jr. et al.** discloses, in Fig.1, that probes 12, 13 located at points Am, Bm respectively (plurality of observing probes distributed at different points). The probes 12, 13 analyze received packets from sites A, B for transmitting to a console 16 (transmitting packets to a collector module) to determine travel time measurement (determining transfer duration). See col.2, line 53 to col.3, line 3. Probes 12, 13 identify data packets in a data stream and generate time stamps (dating and identifying the data packets). See col.3, lines 26-32. Probes 12, 13 analyze received packets to determine the relationship between time stamps, identifier signature and the results of which are stored in a table I (correlating between all measurement results). See col.3, line 35 to col.4, line 10. All the analyzed measurements are transmitted to console 16 (transmitting measurement results to collection module). See col.4, lines 1-10.

Ennis, Jr. et al. does not disclose probes are synchronized, classifying data packets in a flow, counting data packet in a flow, and determining loss rate for data packet. .

Zhang et al. discloses, in Fig.2, digital network analyzers TA 36 (probes) that are arranged to analyze, compare the appearance of data packet in the network such that each analyzer 36 synchronizes its time stamp of packet received at ports (probes are synchronized). See Abstract, col.8, lines 30-35.

Guerin et al. discloses, in Fig. 4a, a process occurs each time a packet is received in a router (a probe). Packet is received at classification 111 which classifies the packet into a stream ID (classifying packet in a flow). See col.8, lines 40-50. Fig.5b shows at step 59 that as the predetermined buffer space allocated to stream n is updated to reflected the addition of the packet into the stream n (counting the packets in the flow). See col.10, lines 35-40.

Chapman et al. discloses the admission control 10, in Fig.1, that compute packet loss characteristic when there are so many TCP connections creating congestions. The computation is performed at a router (calculating packet loss rate). See Fig.2a.

Therefore, it would have been obvious to combine **Chapman et al. , Guerin et al., Zhang et al.** with **Ennis, Jr. et al.** to classify data packets in a flow, count data packet in a flow, and determine loss rate for data packet. The motivation is to determine when the packets are transmitted and received.

In claims 14 and 27, **Ennis, Jr. et al.** discloses packet identifier generated by microprocessor 36 comprises packet signatures (packet signatures contents in data packets). See col.4, lines 20-23.

In claim 21, **Ennis, Jr. et al.** does not disclose packet classifying is according to a contents type of data packet. **Guerin et al.** discloses the classification 111 classifies packet to determine that is a IP packet by checking a subset of bits carried in its header (packet classifying is according to a contents type of data packet). See col.8, lines 42-47.

In claim 23, **Ennis, Jr. et al.** discloses table I that shows time stamps at probes 12, 13 (mapping operations observed by several of probes). See col.3, table I.

In claim 16, the limitations of this claim has been addressed in claim 13.

Claim 28 is rejected under 35 USC 103(a) as being unpatentable over **Ennis, Jr. et al.** (US Pat. No. 5,521,907) in view of **Zhang et al.** (US Pat. No. 5,535,193), in view of **Guerin et al.** (US Pat. No. 6,377,546 B1), in view of **Chapman et al.** (US Pat. No. 6,330,226 B1), and further in view of **Geiger** (US Pat. No. 5,701,302).

In claim 28, **Ennis, Jr. et al.** does not disclose the probe compressing the measurements before transmitting said measurements to the collecting module. **Geiger** discloses a first communication device 107 (a probe, see Fig.1) generates data packets 201-207 (see Fig.2), and selects some of the data packets 202-205 (see Fig.2) for performing compression of each selected data packet. The first device 107 transmits the compressed data packets to a second device 108 (see Fig.1). See Abstract (the probe compressing the measurements before transmitting said measurements to the collecting module). Therefore, it would have been obvious to use the packet compression of **Geiger** into the **Ennis, Jr. et al.** to transmit the compressed packet to the collection module. The motivation is to speed up the transmission.

Allowable Subject Matter

Claims 17-20, 22, 24 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

In claim 17, the prior art does not disclose a semi-static sampling for classes obtained during the classification step and said sampling step comprising selecting those data packets which will cause said one ticket to be issued.

In claim 22, the prior art does not disclose the transfer duration of a given flow F is carried out as follows: $D_{es}(p) = H_s(p) - H_e(p)$

where $D_{es}(p)$ is a transfer duration from an entry point (e) to an exit point (s) for a received data packet (p); $H_e(p)$ is a first time stamping in a ticket associated with the respective data packet (p) by one of said probes at the entry point ; and $H_s(p)$ is a second time stamping in the ticket associated with the respective data packet (p) by said one of said probes at the exit point.

In claim 24, the prior art does not disclose the loss rate for a given flow comprising calculating a number $Pes(pq)$ of said data packets lost in the network between a passage of two data packets designated p and q according to the following formula: $Pes(pq) = Ne(pq) - Ns(pq)$

Where $Ne(pq)$ = number of data packets between the passage of the packets p and q at an exit point; and $Ns(pq)$ = number of packets between the passage of the packets p and q at an entry point.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rosborough et al. (US Pat. No. 6,308,211 B1) discloses Method and Apparatus for Identifying Information Packets.

Kurita et al. (US Pat. No.5,920,568) discloses Scheduling Apparatus and Scheduling Method.

Hjalmtysson (US Pat. No. 6,392,996 B1) discloses Method and Apparatus for Frame Peeking.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Nguyen whose telephone number is 703 306-5445. The examiner can normally be reached on Monday-Friday 8:00 AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 703 306-4744. The fax phone numbers for the organization where this application or proceeding is assigned are 703 305-3988 for regular communications and 703 308-9051 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-4700.


Fax number : 703 872-9314

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Hanh Nguyen

A handwritten signature in black ink, appearing to read 'HNguyen'.

September 26, 2003